

Ser. No. 10/784,357

2

100110189-24

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

64. (Previously Presented) A print cartridge comprising:  
a cartridge body having a lower portion and a vertical wall;  
a printhead attached to said lower portion, the printhead including a plurality of groups of drop generators and a plurality of address lines; and  
a contact array disposed on at least a portion of said vertical wall including a first columnar array, a second columnar array of contact areas adjacent to the first columnar array, a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array,  
wherein four contact areas in the first columnar array are each coupled to a different one of the plurality of groups of drop generators,  
wherein four contact areas in the second columnar array are each coupled to a different one of the plurality of groups of drop generators,  
wherein three contact areas in the second columnar array are each coupled to a different address line of the plurality of address lines,  
wherein one contact area in the third columnar array is coupled to one group of the plurality of drop generators,  
wherein two contact areas in the third columnar array are each coupled to a different address line of the plurality of address lines,  
wherein three contact areas of the fourth columnar array are each coupled to a different one of the plurality of groups of drop generators,  
wherein three contact areas in the fourth columnar array are each coupled to a different address line of the plurality of address lines.

Ser. No. 10/784,357

3

100110189-24

wherein four contact areas in the fifth columnar array are each coupled to a different one of the plurality of groups of drop generators,

wherein two contact areas in the fifth columnar array are each coupled to a different address line of the plurality of address lines,

wherein three contact areas in the sixth columnar array are each coupled to a different address line of the plurality of address lines.

65. (Previously Presented) The print cartridge of claim 64 wherein the four contact areas in the second columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and below the three contact areas in the second columnar array that are each coupled to a different address line of the plurality of address lines.

66. (Previously Presented) The print cartridge of claim 65 wherein the three contact areas in the fourth columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and above the three contact areas in the fourth columnar array that are each coupled to a different address line of the plurality of address lines.

67. (Currently Amended) The print cartridge of claim 66 wherein the first and sixth columnar arrays include five contact areas each, the ~~second and fifth~~ columnar array[s] includes ~~six~~ six contact areas each, and the second, third and fourth columnar arrays include seven contact areas each.

68. (Previously Presented) The print cartridge of claim 64 wherein the four contact areas in the fifth columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and below the two contact areas in the second columnar array that are each coupled to a different address line of the plurality of address lines.

Ser. No. 10/784,357

4

100110189-24

69. (Currently Amended) The print cartridge of claim 64 wherein the first and sixth columnar arrays include five contact areas each, the ~~second and fifth~~ columnar array[s] includes six contact areas each, and the second, third and fourth columnar arrays include seven contact areas each.

70. (Previously Presented) The print cartridge of claim 64 wherein the contact areas are substantially circular.

71. (Previously Presented) The print cartridge of claim 64 wherein the contact areas are substantially square.

72. (Previously Presented) The print cartridge of claim 64 wherein each of the first, third, fourth, and sixth columnar arrays includes a ground contact area.

73. (Previously Presented) The print cartridge of claim 72 wherein the third columnar array includes an identification contact area.

74. (Previously Presented) The print cartridge of claim 64 wherein the printhead includes at least two enable lines and the third and sixth columnar area include a contact area coupled to a different one of the at least two enable lines.

75. (Currently Amended) The print cartridge of claim 64 wherein the group of drop generators are arranged in four columns and

wherein two of the four contact areas in the first columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of two different groups of drop generators in a first column of the four columns of drop generators,

wherein two of the four contact areas in the first columnar array that are each coupled to a different one of the plurality of groups of drop generators are

Ser. No. 10/784,357

5

100110189-24

each coupled to one of two different groups of drop generators in a second column of the four columns of drop generators,

wherein the four contact areas in the second columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of four different groups of drop generators in a third column of the four columns of drop generators,

wherein the one contact area in the third columnar array that is coupled to one group of the plurality of drop generators is coupled to a group of drop generators in the first column of the four columns of drop generators,

wherein one of the three contact areas in the fourth columnar array that is coupled to a different one of the plurality of groups of drop generators is coupled to a group of drop generators in the first column of the four columns of drop generators,

wherein two of the three contact areas in the first fourth columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of two different groups of drop generators in the second column of the four columns of drop generators, and

wherein the four contact areas in the fifth columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of four different groups of drop generators in a fourth column of the four columns of drop generators.

76. (Previously Presented) The print cartridge of claim 75 wherein the first column of drop generators is adjacent to and between the second and third columns, and the second column is adjacent to and between the first and fourth columns.

77. (Previously Presented) The print cartridge of claim 64 wherein each of the group of drop generators is a primitive.

Ser. No. 10/784,357

6

100110189-24

78. (Previously Presented) A print cartridge comprising:  
a cartridge body having a lower portion and a vertical wall;  
a printhead attached to said lower portion, the printhead including a plurality of groups of drop generators and a plurality of address lines; and  
a contact array disposed on at least a portion of said vertical wall including a first columnar array, a second columnar array of contact areas adjacent to the first columnar array, a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array,

wherein two contact areas in the first columnar array are each coupled to a different one of the plurality of groups of drop generators,

wherein two contact areas in the first columnar array are not coupled to any of the plurality of groups of drop generators,

wherein four contact areas in the second columnar array are each coupled to a different one of the plurality of groups of drop generators,

wherein three contact areas in the second columnar array are each coupled to a different address line of the plurality of address lines,

wherein one contact area in the third columnar array is not coupled to any of the plurality of groups of drop generators,

wherein two contact areas in the third columnar array are each coupled to a different address line of the plurality of address lines,

wherein two contact areas of the fourth columnar array are each coupled to a different one of the plurality of groups of drop generators,

wherein one contact area in the fourth columnar array is not coupled to any of the plurality of groups of drop generators,

wherein three contact areas in the fourth columnar array are each coupled to a different address line of the plurality of address lines,

wherein four contact areas in the fifth columnar array are each coupled to a different one of the plurality of groups of drop generators,

Ser. No. 10/784,357

7

100110189-24

wherein two contact areas in the fifth columnar array are each coupled to a different address line of the plurality of address lines,

wherein three contact areas in the sixth columnar array are each coupled to a different address line of the plurality of address lines.

79. (Previously Presented) The print cartridge of claim 78 wherein the four contact areas in the second columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and below the three contact areas in the second columnar array that are each coupled to a different address line of the plurality of address lines.

80. (Previously Presented) The print cartridge of claim 79 wherein the two contact areas in the fourth columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and above the three contact areas in the fourth columnar array that are each coupled to a different address line of the plurality of address lines.

81. (Currently Amended) The print cartridge of claim 80 wherein the first and sixth columnar arrays include five contact areas each, the ~~second and fifth~~ columnar array[s] includes six contact areas ~~each~~, and the second, third and fourth columnar arrays include seven contact areas each.

82. (Previously Presented) The print cartridge of claim 78 wherein the four contact areas in the fifth columnar array that are each coupled to a different one of the plurality of groups of drop generators are adjacent to each other and below the two contact areas in the second columnar array that are each coupled to a different address line of the plurality of address lines.

Ser. No. 10/784,357

8

100110189-24

83. (Currently Amended) The print cartridge of claim 78 wherein the first and sixth columnar arrays include five contact areas each, the ~~second and fifth~~ columnar array[s] includes six contact areas ~~each~~, and the second, third and fourth columnar arrays include seven contact areas each.

84. (Previously Presented) The print cartridge of claim 78 wherein the contact areas are substantially circular.

85. (Previously Presented) The print cartridge of claim 78 wherein the contact areas are substantially square.

86. (Previously Presented) The print cartridge of claim 78 wherein each of the first, third, fourth, and sixth columnar arrays includes a ground contact area.

87. (Previously Presented) The print cartridge of claim 86 wherein the third columnar array includes an identification contact area.

88. (Previously Presented) The print cartridge of claim 78 wherein the printhead includes at least two enable lines and the third and sixth columnar area include a contact area coupled to a different one of the at least two enable lines.

89. (Previously Presented) The print cartridge of claim 78 wherein the group of drop generators are arranged in three columns and

wherein the two contact areas in the first columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of four different groups of drop generators in a first column of the three columns of drop generators,

wherein the four contact areas in the second columnar array that are each coupled to a different one of the plurality of groups of drop generators are each

Ser. No. 10/784,357

9

100110189-24

coupled to one of four different groups of drop generators in a second column of the three columns of drop generators,

wherein the two contact areas in the fourth columnar array that are each coupled to a different one of the plurality of groups of drop generators is coupled to one of the four different groups of drop generators in the first column of the three columns of drop generators, and

wherein the four contact areas in the fifth columnar array that are each coupled to a different one of the plurality of groups of drop generators are each coupled to one of four different groups of drop generators in a third column of the three columns of drop generators.

90. (Previously Presented) The print cartridge of claim 89 wherein the first column of drop generators is between the second and third column of drop generators.

91. (Previously Presented) The print cartridge of claim 78 wherein each of the group of drop generators is a primitive.